

WEST Search History

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DATE: Monday, April 19, 2004

Hide?	Set Name	Query	Hit Count
<i>DB=PGPB, USPT; PLUR=YES; OP=OR</i>			
<input type="checkbox"/>	L5	L4 and haemagglutinin	9
<input type="checkbox"/>	L4	L3 and recombinant	53
<input type="checkbox"/>	L3	L2 and bordetella	70
<input type="checkbox"/>	L2	locht	151
<i>DB=USPT; PLUR=YES; OP=OR</i>			
<input type="checkbox"/>	L1	6660261	1

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L6: Entry 1 of 5

File: PGPB

Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040047867
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040047867 A1

TITLE: Adjuvant composition comprising FHA protein or a fragment of FHA protein in its free form

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Capron, Andre	Phalempin		FR	
<u>Locht</u> , Camille	Bruxelles		BE	
Menozi, Franco	Mons-Hyon		BE	
Poulain-Godefroy, Odile	Lambersart		FR	
Riveau, Gilles	Phalempin		FR	

US-CL-CURRENT: 424/184.1

CLAIMS:

1. Use of the FHA protein or a functional equivalent thereof in its free form for the preparation of a composition adjuvanting the immune response.
2. Use of the FHA protein or a functional equivalent thereof in preparing an immunostimulant composition.
3. Use of a sequence according to claim 1 or claim 2 obtained by conservative substitution of amino acids.
4. Use of a sequence according to claim 1 or claim 2 rendered resistant to proteolysis by replacing the peptide bond --CONH-- by a reduced bond --CH.sub.2NH-- , a retroinverso bond --NHCO--, a methyleneoxy bond --CH.sub.2-- , a thiomethylene bond --SH.sub.2--S--, a carba bond --CH.sub.2CH.sub.2-- , a ketomethylene bond O--CH.sub.2-- , a hydroxyethylene bond --CHOH--CH.sub.2-- , a --N--N bond, an E-alkene bond or a --CH.dbd.CH-- bond.
5. Use according to any one of the preceding claims in which the adjuvant is an amino acid sequence having a homology of at least 70% with FHA.
6. A composition adjuvanting the immune response comprising the FHA protein in its free form, or a derived sequence in accordance with one of claims 3 to 5.
7. An immunogenic composition, characterized in that it comprises an adjuvant according to claim 6, in association with an immunogenic molecule or with an antigen.

8. An immunogenic composition according to claim 7, characterized in that the weight ratio of the adjuvant and the immunogen is in the range 10^{-4} to 10^4 , preferably in the range 0.03 to 300, and more preferably in the range 0.4 to 5.
9. An immunogenic composition according to claim 7, characterized in that the antigen is of bacterial, viral or parasitic origin.
10. An immunogenic composition according to claim 7, characterized in that the antigen is selected from Bordetella, Shigella, Neisseria, Borrelia antigens, or from diphtheria, tetanus or cholera toxins or toxoids.
11. An immunogenic composition according to claim 7, characterized in that the antigen is a viral antigen.
12. An immunogenic composition according to claim 7, characterized in that the antigen is a parasitic antigen, in particular of Plasmodium, Schistosoma or Toxoplasma.
13. A vaccine comprising an immunogenic composition according to one of claims 7 to 12, in association with a pharmaceutically acceptable vehicle.
14. A vaccine according to claim 13, characterized in that the vehicle is compatible with nasal administration.
15. A vaccine according to claim 13, characterized in that the vehicle is compatible with oral administration, subcutaneous administration or intravenous, intradermal or intramuscular administration.
16. A vaccine according to claim 13, characterized in that the vehicle is compatible with rectal, vaginal, ocular or auricular administration.
17. An immunostimulant composition containing FHA or a functional equivalent thereof as the active principle and a pharmaceutically acceptable vehicle compatible with administration to man or to animals.
18. A composition according to claim 17, for oral administration.
19. A composition according to claim 17, for mucosal administration.

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☐ 1. Document ID: US 20040047867 A1

Using default format because multiple data bases are involved.

L6: Entry 1 of 5

File: PGPB

Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040047867

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040047867 A1

TITLE: Adjuvant composition comprising FHA protein or a fragment of FHA protein in its free form

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Capron, Andre	Phalempin		FR	
<u>Locht</u> , Camille	Bruxelles		BE	
Menozzi, Franco	Mons-Hyon		BE	
Poulain-Godefroy, Odile	Lambersart		FR	
Riveau, Gilles	Phalempin		FR	

US-CL-CURRENT: 424/184.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	MMIC	Draw Ds
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☐ 2. Document ID: US 6660261 B1

L6: Entry 2 of 5

File: USPT

Dec 9, 2003

US-PAT-NO: 6660261

DOCUMENT-IDENTIFIER: US 6660261 B1

**** See image for Certificate of Correction ****

TITLE: Bordetella strain expressing the FHA hybrid, liposomes and vaccines

DATE-ISSUED: December 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mielcarek; Nathalie	Lille			FR
<u>Locht</u> ; Camille	Wannehain			FR

h e b b g e e e f e c e f b e

Riveau; Gilles	Lille	FR
Poulain-Godefroy; Odile	Lambersart	FR
Capron; Andre	Phalempin	FR

US-CL-CURRENT: 424/93.4; 424/184.1, 424/200.1, 424/203.1, 424/234.1, 424/242.1,
424/254.1, 424/93.2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMMC	Draw D
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☐ 3. Document ID: US 5427788 A

L6: Entry 3 of 5

File: USPT

Jun 27, 1995

US-PAT-NO: 5427788

DOCUMENT-IDENTIFIER: US 5427788 A

**** See image for Certificate of Correction ****

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: June 27, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico'; Maria B.	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMMC	Draw D
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☐ 4. Document ID: WO 9528486 A2

L6: Entry 4 of 5

File: EPAB

Oct 26, 1995

PUB-NO: WO009528486A2

DOCUMENT-IDENTIFIER: WO 9528486 A2

TITLE: RECOMBINANT PROTEINS OF FILAMENTOUS HAEMAGGLUTININ OF BORDETELLA,
PARTICULARLY BORDETELLA PERTUSSIS, METHOD FOR PRODUCING SAME, AND USES THEREOF FOR
PRODUCING FOREIGN PROTEINS OR VACCINATING ACTIVE PRINCIPLES

PUBN-DATE: October 26, 1995

INVENTOR-INFORMATION:

NAME	COUNTRY
<u>LOCHT</u> , CAMILLE	FR
RENAULD, GENEVIEVE	FR
CAPRON, ANDRE	FR
RIVEAU, GILLES	FR
MENOZZI, FRANCO	BE

JACOB-DUBUISSON, FRANCOISE

FR

INT-CL (IPC): C12 N 15/31; C12 N 15/62; C07 K 14/235; C12 N 1/21; A61 K 39/10
 EUR-CL (EPC): C07K014/235

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NUMC	Draw De
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☐ 5. Document ID: ES 2202363 T3, FR 2718750 A1, WO 9528486 A2, AU 9524121 A, WO 9528486 A3, EP 755447 A1, EP 755447 B1, DE 69531200 E

L6: Entry 5 of 5

File: DWPI

Apr 1, 2004

DERWENT-ACC-NO: 1995-360592

DERWENT-WEEK: 200425

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TITLE: DNA encoding fusion protein of B.pertussis filamentous haemagglutinin and heterologous antigen - useful as vaccines having the same immunogenicity as FHA, partic. for nasal admin

INVENTOR: CAPRON, A; JACOB-DUBUISSON, F ; LOCHT, C ; MENOZZI, F ; RENAULD, G ; RIVEAU, G ; MENOZZI, F

PRIORITY-DATA: 1994FR-0004661 (April 19, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
ES 2202363 T3	April 1, 2004		000	C12N015/31
FR 2718750 A1	October 20, 1995		058	C12N015/31
WO 9528486 A2	October 26, 1995	F	062	C12N015/31
AU 9524121 A	November 10, 1995		000	C12N015/31
WO 9528486 A3	January 11, 1996		000	C12N015/31
EP 755447 A1	January 29, 1997	F	000	C12N015/31
EP 755447 B1	July 2, 2003	F	000	C12N015/31
DE 69531200 E	August 7, 2003		000	C12N015/31

INT-CL (IPC): A61 K 39/10; C07 K 14/235; C12 N 1/21; C12 N 15/31; C12 N 15/62; C12 P 21/02; C12 N 1/21; C12 R 1:01; C12 N 1/21; C12 R 1:01; C12 N 1/21; C12 R 1:01; C12 N 1/21; C12 R 1:01

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NUMC	Draw De
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L6: Entry 2 of 5

File: USPT

Dec 9, 2003

US-PAT-NO: 6660261

DOCUMENT-IDENTIFIER: US 6660261 B1

**** See image for Certificate of Correction ****TITLE: Bordetella strain expressing the FHA hybrid, liposomes and vaccines

DATE-ISSUED: December 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mielcarek; Nathalie	Lille			FR
<u>Locht</u> ; Camille	Wannehain			FR
Riveau; Gilles	Lille			FR
Poulain-Godefroy; Odile	Lambersart			FR
Capron; Andre	Phalempin			FR

US-CL-CURRENT: 424/93.4; 424/184.1, 424/200.1, 424/203.1, 424/234.1, 424/242.1,
424/254.1, 424/93.2

CLAIMS:

What is claimed is:

1. Bordetella pertussis strain BPNX deposited under accession number I-1770 on Oct. 8, 1996, in the National Collection of Microorganism Cultures of "l'Institut Pasteur" (CNCM).
2. A pharmaceutical composition containing a pharmacologically efficient quantity of a Bordetella strain deficient in the production of pertussis toxin which, by elimination or deletion of the gene coding for the pertussis toxin, does not produce pertussis toxin, wherein said Bordetella strain expresses a hybrid protein comprising Bordetella pertussis filamentous hemagglutinin and a protein heterologous to said Bordetella pertussis filamentous hemagglutinin; wherein said deficient Bordetella strain induces a higher production of antibodies against said filamentous hemagglutinin than the wild-type parent Bordetella pertussis strain; and wherein said deficient Bordetella strain colonizes lungs of an animal to which said pharmaceutical composition is administered.
3. The pharmaceutical composition according to claim 2, wherein the heterologous protein comprises at least one epitope of a protein expressed upon infections of the upper or lower respiratory tract caused by a pathogen.
4. The pharmaceutical composition according to claim 2, wherein the heterologous protein comprises at least one epitope of a protein expressed by a pathogen upon a mucosal infection.

5. The pharmaceutical composition according to claim 2, wherein the heterologous protein comprises at least one epitope of a protein expressed by a pathogen upon a systemic infection.

6. The pharmaceutical composition according to claim 2, wherein said hybrid protein comprises said Bordetella pertussis filamentous hemagglutinin and Schistosoma mansoni glutathione-S-transferase.

7. The pharmaceutical composition according to claim 2, wherein the strain belongs to Bordetella pertussis.

8. The pharmaceutical composition comprising a pharmacologically efficient quantity of Bordetella pertussis strain BPNX deposited under accession number I-1770 on Oct. 8, 1996, in the National Collection of Microorganism Cultures of "l'Institut Pasteur" (CNCM).

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L6: Entry 3 of 5

File: USPT

Jun 27, 1995

US-PAT-NO: 5427788

DOCUMENT-IDENTIFIER: US 5427788 A

**** See image for Certificate of Correction ****

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: June 27, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino.	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico'; Maria B.	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12

CLAIMS:

We claim:

1. Composition for the stimulation of protection against infections of Bordetella pertussis including at least an effective quantity of pertussis toxin obtained by chemical synthesis or from microorganisms transformed with molecules of recombinant DNA containing the five genes that code for pertussis toxin.
2. In the process for the preparation of anti-pertussis vaccine containing detoxified pertussis toxin, the improvement which consists in substituting for said pertussis toxin the pertussis toxin obtained by the growth of a micro-organism transformed by a hybrid plasmid obtained by the union of an expression vector and a cloned and sequenced Eco RI fragment of Bordetella pertussis chromosomal DNA with 4696 base pairs containing the genes which code for the five subunits of the pertussis toxin, comprising the sequence given in FIGS. 3 and 13.
3. The process of claim 2 wherein said Eco RI fragment or said further fragments are placed under the control of the regions with the hybrid plasmid which regulate their expression.
4. The process of claim 3 wherein said hybrid plasmid in pPT101 in which the Eco RI fragment is inserted in the Eco RI restriction site of pEMBL8.
5. The process of claim 2 wherein the transformed micro-organism is Escherichia coli.
6. The process of claim 5 wherein the transformed micro-organism is ATCC 67854.

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☐ 1. Document ID: US 20040048253 A1

Using default format because multiple data bases are involved.

L11: Entry 1 of 29

File: PGPB

Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040048253

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040048253 A1

TITLE: Molecules for diagnostics and therapeutics

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Panzer, Scott R.	Sunnyvale	CA	US	
Spiro, Peter A.	Palo Alto	CA	US	
Banville, Steven C.	Palo Alto	CA	US	
Shah, Purvi	San Jose	CA	US	
Chalup, Michael S.	Sunnyvale	CA	US	
Chang, Simon C	Mountain View	CA	US	
Chen, Alice J.	San Jose	CA	US	
D'Sa, Steven A.	East Palo	CA	US	
Amshey, Stefan	San Francisco	CA	US	
Dahl, Christopher E.	Fremont	CA	US	
Dam, Tam C.	San Jose	CA	US	
Daniels, Susan E.	Palo Alto	CA	US	
Dufour, Gerard E.	Castro Valley	CA	US	
Flores, Vincent	Union City	CA	US	
Fong, Willy T.	San Francisco	CA	US	
Greenawalt, Lila B.	San Jose	CA	US	
Jackson, Jennifer L.	Mountain View	CA	US	
Jones, Anissa L.	San Jose	CA	US	
Liu, Tommy F.	Daly City	CA	US	
Lincoln, Ann M. Roseberry	Redwood City	CA	US	
Rosen, Bruce H.	Menlo Park	CA	US	
Russo, Frank D.	Rossette Court Sunnyvale	CA	US	
Stockdreher, Theresa K.	Sunnyvale	CA	US	
Daffo, Abel	San Jose	CA	US	
Wright, Rachel J.	Mountain View	CA	US	
Yap, Pierre E.	Lafayette	CA	US	

Yu, Jimmy Y.	Fremont	CA	US
Bradley, Diana L.	Soquel	CA	US
Bratcher, Shawn R.	Mountain View	CA	US
Chen, Wensheng	Mountain View	CA	US
Cohen, Howard J.	Palo Alto	CA	US
Hodgson, David M.	Ann Arbor	MI	US
Lincoln, Stephen E.	Redwood City	CA	US
Jackson, Stuart E.	Mountain View	CA	US

US-CL-CURRENT: [435/6](#); [435/320.1](#), [435/325](#), [435/69.1](#), [530/350](#), [536/23.5](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 2. Document ID: US 20020132753 A1

L11: Entry 2 of 29

File: PGPB

Sep 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020132753

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020132753 A1

TITLE: Nucleic acids, proteins, and antibodies

PUBLICATION-DATE: September 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rosen, Craig A.	Laytonsville	MD	US	
Ruben, Steven M.	Olney	MD	US	
Barash, Steven C.	Rockville	MD	US	

US-CL-CURRENT: [514/1](#); [435/320.1](#), [435/325](#), [435/6](#), [435/69.1](#), [536/23.1](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 3. Document ID: US 6706494 B1

L11: Entry 3 of 29

File: USPT

Mar 16, 2004

US-PAT-NO: 6706494

DOCUMENT-IDENTIFIER: US 6706494 B1

TITLE: BASB028 polypeptides and polynucleotides encoding therefor from moraxella catarrhalis

DATE-ISSUED: March 16, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
------	------	-------	----------	---------

Ruelle; Jean-Louis

Limal

BE

US-CL-CURRENT: 435/69.1; 424/184.1, 424/185.1, 424/190.1, 424/192.1, 424/200.1,
424/234.1, 424/251.1, 435/320.1, 435/69.3, 536/23.1, 536/23.4, 536/24.3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNOC	Draw De
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☐ 4. Document ID: US 6680182 B1

L11: Entry 4 of 29

File: USPT

Jan 20, 2004

US-PAT-NO: 6680182

DOCUMENT-IDENTIFIER: US 6680182 B1

**** See image for Certificate of Correction ****TITLE: Expression of recombinant fusion proteins in attenuated bacteria

DATE-ISSUED: January 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Khan; Mohammed Anjam	Cambridge			GB
Villarreal-Ramos; Bernardo	Cambridge			GB
Hormaeche; Carlos Estenio	Newcastle upon Tyne			GB
Chatfield; Steven Neville	London			GB
Dougan; Gordon	London			GB

US-CL-CURRENT: 435/69.7; 424/191.1, 424/200.1, 424/258.1, 424/93.2, 435/69.3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNOC	Draw De
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☐ 5. Document ID: US 6660261 B1

L11: Entry 5 of 29

File: USPT

Dec 9, 2003

US-PAT-NO: 6660261

DOCUMENT-IDENTIFIER: US 6660261 B1

**** See image for Certificate of Correction ****TITLE: Bordetella strain expressing the FHA hybrid, liposomes and vaccines

DATE-ISSUED: December 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mielcarek; Nathalie	Lille			FR
Locht; Camille	Wannehain			FR
Riveau; Gilles	Lille			FR
Poulain-Godefroy; Odile	Lambersart			FR
Capron; Andre	Phalempin			FR

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US-CL-CURRENT: 424/93.4; 424/184.1, 424/200.1, 424/203.1, 424/234.1, 424/242.1,
424/254.1, 424/93.2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NUMC	Draw De
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☐ 6. Document ID: US 6559294 B1

L11: Entry 6 of 29

File: USPT

May 6, 2003

US-PAT-NO: 6559294

DOCUMENT-IDENTIFIER: US 6559294 B1

**** See image for Certificate of Correction ****

TITLE: Chlamydia pneumoniae polynucleotides and uses thereof

DATE-ISSUED: May 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Griffais; Remy	Momtrouge			FR
Hoiseth; Susan K.	Fairport	NY		
Zagursky; Robert John	Victor	NY		
Metcalf; Benjamin J.	Rochester	NY		
Peek; Joel A.	Pittsford	NY		
Sankaran; Banumathi	Penfield	NY		
Fletcher; Leah Diane	Geneseo	NY		

US-CL-CURRENT: 536/23.1; 435/320.1, 435/69.1, 435/70.1, 536/24.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NUMC	Draw De
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☐ 7. Document ID: US 6492123 B1

L11: Entry 7 of 29

File: USPT

Dec 10, 2002

US-PAT-NO: 6492123

DOCUMENT-IDENTIFIER: US 6492123 B1

TITLE: Multivalent and multispecific binding proteins and their use

DATE-ISSUED: December 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Holliger; Kaspar-Philip	Cambridge			GB
Griffiths; Andrew David	Cambridge			GB
Hoogenboom; Hendricus Renerus Jacobus Matheus	Hasselt			BE
Malmqvist; Magnus	Uppsala			SE
Marks; James David	Kensington	CA		

McGuinness; Brian Timothy	Cambridge	GB
Pope; Anthony Richard	Cambridge	GB
Prospero; Terence Derek	Cambridge	GB
Winter; Gregory Paul	Cambridge	GB

US-CL-CURRENT: 435/7.1; 424/135.1, 530/387.1, 530/387.3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KIMC	Draw De
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☐ 8. Document ID: US 6475754 B1

L11: Entry 8 of 29

File: USPT

Nov 5, 2002

US-PAT-NO: 6475754

DOCUMENT-IDENTIFIER: US 6475754 B1

**** See image for Certificate of Correction ****

TITLE: Polynucleotides encoding Bordatella bronchiseptica fimbrial proteins (FimN), vectors, and expression systems therefor

DATE-ISSUED: November 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bemis; David A.	Maryville	TN		
Kania; Stephen A.	Powell	TN		
Moore; Robert N.	Knoxville	TN		

US-CL-CURRENT: 435/69.1; 435/252.3, 435/254.11, 435/257.3, 435/320.1, 435/325,
435/69.7, 435/70.1, 435/71.1, 530/350, 536/23.4, 536/23.7, 536/24.32, 536/24.33

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KIMC	Draw De
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☐ 9. Document ID: US 6350612 B1

L11: Entry 9 of 29

File: USPT

Feb 26, 2002

US-PAT-NO: 6350612

DOCUMENT-IDENTIFIER: US 6350612 B1

TITLE: Isolation and expression of DNA sequence encoding the five subunits of Bordetella pertussis toxin

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico; Maria Beatrice	Quercegrossa			IT

US-CL-CURRENT: 435/455; 435/252.1, 435/320.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw De
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☐ 10. Document ID: US 6316609 B1

L11: Entry 10 of 29

File: USPT

Nov 13, 2001

US-PAT-NO: 6316609

DOCUMENT-IDENTIFIER: US 6316609 B1

TITLE: Nucleotide sequence of Escherichia coli pathogenicity islands

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dillon; Patrick J.	Gaithersburg	MD		
Choi; Gil H.	Rockville	MD		
Welch; Rodney A.	Madison	WI		

US-CL-CURRENT: 536/23.1; 435/252.3, 435/252.33, 435/320.1, 435/325, 536/24.3,
536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw De
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L10 and fusion

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Search Results - Record(s) 11 through 20 of 29 returned.

☐ 11. Document ID: US 6284256 B1

Using default format because multiple data bases are involved.

L11: Entry 11 of 29

File: USPT

Sep 4, 2001

US-PAT-NO: 6284256

DOCUMENT-IDENTIFIER: US 6284256 B1

TITLE: Bordetella bronchiseptica vaccine

DATE-ISSUED: September 4, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Savelkoul; Paul	Weesp			NL
Gaastra; Willem	Weesp			NL

US-CL-CURRENT: 424/253.1; 424/240.1, 424/254.1, 435/69.1, 435/69.7, 514/2, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Keywords	Drawings
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☐ 12. Document ID: US 6264954 B1

L11: Entry 12 of 29

File: USPT

Jul 24, 2001

US-PAT-NO: 6264954

DOCUMENT-IDENTIFIER: US 6264954 B1

TITLE: Haemophilus outer membrane protein

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chong; Pele	Richmond Hill			CA
Thomas; Wayne	Nedlands			AU
Yang; Yan Ping	Willowdale			CA
Loosmore; Sheena	Aurora			CA
Sia; Dw.o slashed. Yuan Charles	Thornhill			CA
Klein; Michel	Willowdale			CA

US-CL-CURRENT: 424/190.1; 424/185.1, 424/192.1, 424/193.1, 424/197.11, 424/203.1,

424/234.1, 424/256.1, 435/69.1, 435/69.3, 435/69.7, 530/300, 530/350, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWOC	Draw Dg
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☐ 13. Document ID: US 6218141 B1

L11: Entry 13 of 29

File: USPT

Apr 17, 2001

US-PAT-NO: 6218141

DOCUMENT-IDENTIFIER: US 6218141 B1

TITLE: High molecular weight surface proteins of non-typeable haemophilus

DATE-ISSUED: April 17, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barenkamp; Stephen J.	Webster Grove	MO		

US-CL-CURRENT: 435/69.1; 424/185.1, 424/256.1, 435/69.3, 435/71.1, 435/71.2,
530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWOC	Draw Dg
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☐ 14. Document ID: US 6140082 A

L11: Entry 14 of 29

File: USPT

Oct 31, 2000

US-PAT-NO: 6140082

DOCUMENT-IDENTIFIER: US 6140082 A

TITLE: Expression of gene products from genetically manipulated strains of
bordetella

DATE-ISSUED: October 31, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CA
Yacoob; Reza Khayyam	Mississauga			CA
Zealey; Gavin Ross	Thornhill			CA
Klein; Michel Henri	Willowdale			CA

US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/325, 435/69.8, 530/350, 536/23.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWOC	Draw Dg
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☐ 15. Document ID: US H001892 H

L11: Entry 15 of 29

File: USPT

Oct 3, 2000

US-PAT-NO: H001892

DOCUMENT-IDENTIFIER: US H001892 H

TITLE: High volume nutrient based yeast two-hybrid assay for the identification of specific protein:protein interacting inhibitors

DATE-ISSUED: October 3, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Klein; Ronald D.	Schoolcraft	MI		
Buyse; Jerry M.	Portage	MI		

US-CL-CURRENT: 435/69.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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☐ 16. Document ID: US 6083743 A

L11: Entry 16 of 29

File: USPT

Jul 4, 2000

US-PAT-NO: 6083743

DOCUMENT-IDENTIFIER: US 6083743 A

TITLE: Haemophilus outer membrane protein

DATE-ISSUED: July 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chong; Pele	Richmond Hill			CA
Thomas; Wayne	Nedlands			AU
Yang; Yan Ping	Willowdale			CA
Loosmore; Sheena	Aurora			CA
Sia; Dwe Yuan Charles	Thornhill			CA
Klein; Michel	Willowdale			CA

US-CL-CURRENT: 435/320.1, 424/185.1, 424/192.1, 424/193.1, 424/197.11, 424/203.1, 424/234.1, 424/256.1, 435/69.1, 435/69.3, 435/69.7, 530/300, 530/350, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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☐ 17. Document ID: US 6040427 A

L11: Entry 17 of 29

File: USPT

Mar 21, 2000

US-PAT-NO: 6040427

DOCUMENT-IDENTIFIER: US 6040427 A

TITLE: Vaccine

DATE-ISSUED: March 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Locht; Camille	Wannehaing			FR
Lobet; Yves	Rixensart			BE

US-CL-CURRENT: 530/350; 424/200.1, 435/252.3, 435/252.33, 435/320.1, 435/471,
435/69.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 18. Document ID: US 6036960 A

L11: Entry 18 of 29

File: USPT

Mar 14, 2000

US-PAT-NO: 6036960

DOCUMENT-IDENTIFIER: US 6036960 A

TITLE: Filamentous hemagglutinin of B. pertussis

DATE-ISSUED: March 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Relman; David A.	Menlo Park	CA	94025	
Domenighini; Mario	53100 Siena			IT
Rappuoli; Rino	Quercegrossa, 53100 Siena			IT
Falkow; Stanley	Portola Valley	CA	94025	

US-CL-CURRENT: 424/253.1; 435/252.3, 435/253.1, 435/320.1, 435/69.1, 435/69.3,
435/7.1, 435/91.1, 536/22.1, 536/23.1, 536/23.7, 536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 19. Document ID: US 5998168 A

L11: Entry 19 of 29

File: USPT

Dec 7, 1999

US-PAT-NO: 5998168

DOCUMENT-IDENTIFIER: US 5998168 A

TITLE: Expression of gene products from genetically manipulated strains of
bordetella

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CA
Yacoob; Reza Khayyam	Mississauga			CA
Zealey; Gavin Ross	Thornhill			CA
Klein; Michel Henri	Willowdale			CA

US-CL-CURRENT: [435/69.1](#); [435/243](#), [435/252.3](#), [435/325](#), [530/350](#), [536/23.1](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 20. Document ID: US 5942418 A

L11: Entry 20 of 29

File: USPT

Aug 24, 1999

US-PAT-NO: 5942418

DOCUMENT-IDENTIFIER: US 5942418 A

TITLE: Expression of gene products from genetically manipulated strains of Bordetella

DATE-ISSUED: August 24, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CA
Yacoob; Reza K.	Mississauga			CA
Zealey; Gavin R.	Thornhill			CA
Klein; Michel H.	Willowdale			CA

US-CL-CURRENT: [435/69.1](#); [435/252.3](#), [435/320.1](#), [536/23.1](#), [536/24.1](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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Search Results - Record(s) 21 through 29 of 29 returned.

☐ 21. Document ID: US 5939064 A

Using default format because multiple data bases are involved.

L11: Entry 21 of 29

File: USPT

Aug 17, 1999

US-PAT-NO: 5939064

DOCUMENT-IDENTIFIER: US 5939064 A

TITLE: Bordetella bronchiseptica vaccine

DATE-ISSUED: August 17, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Savelkoul; Paul	Weesp			NL
Gaastra; Willem	Weesp			NL

US-CL-CURRENT: 424/93.2; 435/320.1, 435/455, 435/69.1, 514/44, 536/23.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	K00C	Draw De
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☐ 22. Document ID: US 5932714 A

L11: Entry 22 of 29

File: USPT

Aug 3, 1999

US-PAT-NO: 5932714

DOCUMENT-IDENTIFIER: US 5932714 A

TITLE: Expression of gene products from genetically manipulated strains of Bordetella

DATE-ISSUED: August 3, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CA
Yacoob; Reza Khayyam	Mississauga			CA
Zealey; Gavin Ross	Thornhill			CA
Klein; Michel Henri	Willowdale			CA

US-CL-CURRENT: 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMMC	Draw De
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☐ 23. Document ID: US 5928651 A

L11: Entry 23 of 29

File: USPT

Jul 27, 1999

US-PAT-NO: 5928651

DOCUMENT-IDENTIFIER: US 5928651 A

TITLE: Gene encoding high molecular surface protein-2 non-typeable haemophilus

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barenkamp; Stephen J.	Webster Grove	MO		

US-CL-CURRENT: 424/256.1; 424/184.1, 435/69.1, 435/69.3, 536/22.1, 536/23.1,
536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMMC	Draw De
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☐ 24. Document ID: US 5837242 A

L11: Entry 24 of 29

File: USPT

Nov 17, 1998

US-PAT-NO: 5837242

DOCUMENT-IDENTIFIER: US 5837242 A

TITLE: Multivalent and multispecific binding proteins, their manufacture and use

DATE-ISSUED: November 17, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Holliger; Kaspar-Philipp	Cambridge			GB
Griffiths; Andrew David	Cambridge			GB
Hoogenboom; Hendricus Renerus Jacobus Matheus	Hasselt			BE
Malmqvist; Magnus	Upsala			SE
Marks; James David	Kensington	CA		
McGuinness; Brian Timothy	Cambridge			GB
Pope; Anthony Richard	Cambridge			GB
Prospero; Terence Derek	Cambridge			GB
Winter; Gregory Paul	Cambridge			GB

US-CL-CURRENT: 424/136.1; 435/320.1, 435/328, 435/69.7, 530/387.3, 530/412,
530/413, 536/23.4, 536/24.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMMC	Draw De
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☐ 25. Document ID: US 5786189 A

L11: Entry 25 of 29

File: USPT

Jul 28, 1998

US-PAT-NO: 5786189

DOCUMENT-IDENTIFIER: US 5786189 A

TITLE: Vaccine

DATE-ISSUED: July 28, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Locht; Camille	Wannehain			FR
Lobet; Yves	Rixensart			BE

US-CL-CURRENT: 424/200.1; 424/254.1, 435/193, 435/252.3, 435/252.31, 435/252.33,
435/252.35, 435/254.2, 435/320.1, 435/69.1, 530/403, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KOMC	Draw De
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☐ 26. Document ID: US 5785971 A

L11: Entry 26 of 29

File: USPT

Jul 28, 1998

US-PAT-NO: 5785971

DOCUMENT-IDENTIFIER: US 5785971 A

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: July 28, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico; Maria Beatrice	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KOMC	Draw De
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☐ 27. Document ID: US 5643747 A

L11: Entry 27 of 29

File: USPT

Jul 1, 1997

US-PAT-NO: 5643747

DOCUMENT-IDENTIFIER: US 5643747 A

TITLE: Genes for the export of pertussis holotoxin

DATE-ISSUED: July 1, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baker; Steven M.	Rochester	NY		
Deich; Robert A.	Rochester	NY		

US-CL-CURRENT: 435/69.1; 435/252.3, 435/252.33, 435/320.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 28. Document ID: US 5603938 A

L11: Entry 28 of 29

File: USPT

Feb 18, 1997

US-PAT-NO: 5603938

DOCUMENT-IDENTIFIER: US 5603938 A

TITLE: High molecular weight surface proteins of non-typeable haemophilus

DATE-ISSUED: February 18, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barenkamp; Stephen J.	Webster Grove	MO		

US-CL-CURRENT: 424/256.1; 435/69.1, 435/69.3, 536/22.1, 536/23.1, 536/23.7,
536/24.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 29. Document ID: US 5427788 A

L11: Entry 29 of 29

File: USPT

Jun 27, 1995

US-PAT-NO: 5427788

DOCUMENT-IDENTIFIER: US 5427788 A

**** See image for Certificate of Correction ****

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: June 27, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico'; Maria B.	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KM/C	Draw De
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Chaudhary, Divya	Andover	MA	US
Long, Andrew	Chelmsford	MA	US

US-CL-CURRENT: 514/12; 514/44

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KM/C	Draw D
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☐ 3. Document ID: US 6660261 B1

L5: Entry 3 of 9

File: USPT

Dec 9, 2003

US-PAT-NO: 6660261

DOCUMENT-IDENTIFIER: US 6660261 B1

**** See image for Certificate of Correction ****TITLE: Bordetella strain expressing the FHA hybrid, liposomes and vaccines

DATE-ISSUED: December 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mielcarek; Nathalie	Lille			FR
<u>Locht</u> ; Camille	Wannehain			FR
Riveau; Gilles	Lille			FR
Poulain-Godefroy; Odile	Lambersart			FR
Capron; Andre	Phalempin			FR

US-CL-CURRENT: 424/93.4; 424/184.1, 424/200.1, 424/203.1, 424/234.1, 424/242.1,
424/254.1, 424/93.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KM/C	Draw D
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☐ 4. Document ID: US 6548265 B2

L5: Entry 4 of 9

File: USPT

Apr 15, 2003

US-PAT-NO: 6548265

DOCUMENT-IDENTIFIER: US 6548265 B2

TITLE: Treatment or prophylaxis of diseases caused by pilus-forming bacteria

DATE-ISSUED: April 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hultgren; Scott	Ballwin	MO		
Kuehn; Meta	Berkeley	CA		
Xu; Zheng	Blue Bell	PA		
Ogg; Derek	Uppsala			SE

Harris; Mark	Uppsala	SE
Lepisto; Matti	Lund	SE
Jones; Charles Hal	Saint Louis	MO
Kihlberg; Jan	Dalby	SE

US-CL-CURRENT: 435/7.37; 424/184.1, 424/234.1, 424/241.1, 424/242.1, 435/243,
435/252.8, 435/7.32, 703/11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 5. Document ID: US 6420127 B1

L5: Entry 5 of 9

File: USPT

Jul 16, 2002

US-PAT-NO: 6420127

DOCUMENT-IDENTIFIER: US 6420127 B1

TITLE: Compounds and pharmaceutical compositions for the treatment and prophylaxis
of bacterial infections

DATE-ISSUED: July 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hultgren; Scott	Ballwin	MO		
Kuehn; Meta	Berkeley	CA		
Xu; Zheng	Blue Bell	PA		
Ogg; Derek	Uppsala			SE
Harris; Mark	Uppsala			SE
Lepisto; Matti	Lund			SE
Jones; Charles Hal	Saint Louis	MO		
Kihlberg; Jan	Dalby			SE

US-CL-CURRENT: 435/7.37; 424/241.1, 424/242.1, 424/257.1, 435/849

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 6. Document ID: US 6153396 A

L5: Entry 6 of 9

File: USPT

Nov 28, 2000

US-PAT-NO: 6153396

DOCUMENT-IDENTIFIER: US 6153396 A

TITLE: Treatment or prophylaxis of diseases caused by pilus-forming bacteria

DATE-ISSUED: November 28, 2000

INVENTOR-INFORMATION:

h e b b g e e e f e e e f b e

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hultgren; Scott	Ballwin	MO		
Kuehn; Meta	Berkeley	CA		
Xu; Zheng	Blue Bell	PA		
Ogg; Derek	Uppsala			SE
Harris; Mark	Uppsala			SE
Lepisto ; Matti	Lund			SE
Kihlberg; Jan	Dalby			SE
Jones; Charles Hal	St. Louis	MO		

US-CL-CURRENT: 435/7.32; 424/241.1, 424/242.1, 424/257.1, 435/7.37, 435/849

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Drawings
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☐ 7. Document ID: US 6001823 A

L5: Entry 7 of 9

File: USPT

Dec 14, 1999

US-PAT-NO: 6001823

DOCUMENT-IDENTIFIER: US 6001823 A

TITLE: Treatment or prophylaxis of diseases caused by pilus-forming bacteria

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hultgren; Scott	Ballwin	MO		
Kuehn; Meta	Berkeley	CA	94705	
Xu; Zheng	Blue Bell	PA	19422	
Ogg; Derek	Uppsala			SE
Harris; Mark	S-756 45 Uppsala			SE
Lepisto ; Matti	S-224 73 Lund			SE
Kihlberg; Jan	S-240 10 Dalby			SE
Jones; Charles Hal	St. Louis	MO	63110	

US-CL-CURRENT: 514/99; 514/382, 514/459, 514/460, 548/252, 548/253, 549/216,
549/416, 549/417, 549/419, 549/420

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Drawings
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☐ 8. Document ID: US 5705361 A

L5: Entry 8 of 9

File: USPT

Jan 6, 1998

US-PAT-NO: 5705361

DOCUMENT-IDENTIFIER: US 5705361 A

TITLE: Hybrid transposon with PT operon, plasmids and bacterial strains therefor

DATE-ISSUED: January 6, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Walker; Mark	Brunswick			DE
Timmis; Kenneth	Brunswick			DE

US-CL-CURRENT: 435/69.3; 435/252.3, 435/320.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Drawings
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☐ 9. Document ID: US 5427788 A

L5: Entry 9 of 9

File: USPT

Jun 27, 1995

US-PAT-NO: 5427788

DOCUMENT-IDENTIFIER: US 5427788 A

**** See image for Certificate of Correction ****

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: June 27, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico'; Maria B.	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Drawings
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File: USPT

Dec 9, 2003

US-PAT-NO: 6660261DOCUMENT-IDENTIFIER: US 6660261 B1**** See image for Certificate of Correction ****

TITLE: Bordetella strain expressing the FHA hybrid, liposomes and vaccines

DATE-ISSUED: December 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mielcarek; Nathalie	Lille			FR
Locht; Camille	Wannehain			FR
Riveau; Gilles	Lille			FR
Poulain-Godefroy; Odile	Lambersart			FR
Capron; Andre	Phalempin			FR

US-CL-CURRENT: 424/93.4; 424/184.1, 424/200.1, 424/203.1, 424/234.1, 424/242.1,
424/254.1, 424/93.2

CLAIMS:

What is claimed is:

1. Bordetella pertussis strain BPNX deposited under accession number I-1770 on Oct. 8, 1996, in the National Collection of Microorganism Cultures of "l'Institut Pasteur" (CNCM).
2. A pharmaceutical composition containing a pharmacologically efficient quantity of a Bordetella strain deficient in the production of pertussis toxin which, by elimination or deletion of the gene coding for the pertussis toxin, does not produce pertussis toxin, wherein said Bordetella strain expresses a hybrid protein comprising Bordetella pertussis filamentous hemagglutinin and a protein heterologous to said Bordetella pertussis filamentous hemagglutinin; wherein said deficient Bordetella strain induces a higher production of antibodies against said filamentous hemagglutinin than the wild-type parent Bordetella pertussis strain; and wherein said deficient Bordetella strain colonizes lungs of an animal to which said pharmaceutical composition is administered.
3. The pharmaceutical composition according to claim 2, wherein the heterologous protein comprises at least one epitope of a protein expressed upon infections of the upper or lower respiratory tract caused by a pathogen.
4. The pharmaceutical composition according to claim 2, wherein the heterologous protein comprises at least one epitope of a protein expressed by a pathogen upon a mucosal infection.
5. The pharmaceutical composition according to claim 2, wherein the heterologous protein

comprises at least one epitope of a protein expressed by a pathogen upon a systemic infection.

6. The pharmaceutical composition according to claim 2, wherein said hybrid protein comprises said *Bordetella pertussis* filamentous hemagglutinin and *Schistosoma mansoni* glutathione-S-transferase.

7. The pharmaceutical composition according to claim 2, wherein the strain belongs to *Bordetella pertussis*.

8. The pharmaceutical composition comprising a pharmacologically efficient quantity of *Bordetella pertussis* strain BPNX deposited under accession number I-1770 on Oct. 8, 1996, in the National Collection of Microorganism Cultures of "l'Institut Pasteur" (CNCM).

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L5: Entry 9 of 9

File: USPT

Jun 27, 1995

US-PAT-NO: 5427788

DOCUMENT-IDENTIFIER: US 5427788 A

**** See image for Certificate of Correction ****

TITLE: Pertussis toxin and use in vaccines

DATE-ISSUED: June 27, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rappuoli; Rino	Quercegrossa-Monteriggioni			IT
Nicosia; Alfredo	Siena			IT
Arico'; Maria B.	Quercegrossa			IT

US-CL-CURRENT: 424/190.1; 424/240.1, 424/254.1, 514/12

CLAIMS:

We claim:

1. Composition for the stimulation of protection against infections of Bordetella pertussis including at least an effective quantity of pertussis toxin obtained by chemical synthesis or from microorganisms transformed with molecules of recombinant DNA containing the five genes that code for pertussis toxin.
2. In the process for the preparation of anti-pertussis vaccine containing detoxified pertussis toxin, the improvement which consists in substituting for said pertussis toxin the pertussis toxin obtained by the growth of a micro-organism transformed by a hybrid plasmid obtained by the union of an expression vector and a cloned and sequenced Eco RI fragment of Bordetella pertussis chromosomal DNA with 4696 base pairs containing the genes which code for the five subunits of the pertussis toxin, comprising the sequence given in FIGS. 3 and 13.
3. The process of claim 2 wherein said Eco RI fragment or said further fragments are placed under the control of the regions with the hybrid plasmid which regulate their expression.
4. The process of claim 3 wherein said hybrid plasmid in pPT101 in which the Eco RI fragment is inserted in the Eco RI restriction site of pEMBL8.
5. The process of claim 2 wherein the transformed micro-organism is Escherichia coli.
6. The process of claim 5 wherein the transformed micro-organism is ATCC 67854.

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☐ 1. Document ID: US 20040047867 A1

Using default format because multiple data bases are involved.

L5: Entry 1 of 9

File: PGPB

Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040047867

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040047867 A1

TITLE: Adjuvant composition comprising FHA protein or a fragment of FHA protein in its free form

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Capron, Andre	Phalempin		FR	
<u>Locht</u> , Camille	Bruxelles		BE	
Menozzi, Franco	Mons-Hyon		BE	
Poulain-Godefroy, Odile	Lambersart		FR	
Riveau, Gilles	Phalempin		FR	

US-CL-CURRENT: 424/184.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	WMO	Draw. De
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☐ 2. Document ID: US 20020068696 A1

L5: Entry 2 of 9

File: PGPB

Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020068696

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020068696 A1

TITLE: Trade molecules and uses related thereto

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wood, Clive	Boston	MA	US	

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DATE: Monday, April 19, 2004

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<input type="checkbox"/>	L4	L3 and recombinant	53
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<input type="checkbox"/>	L3	L2 and bordetella	70
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